

SHORT COMMUNICATION

DESCRIPTION OF THE MALE OF *PLECTREURYS* *ARIDA* (ARANEAE, PLECTREURIDAE)

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ABSTRACT. The first known males of the spider *Plectreurys arida* Gertsch are described from the xeric shrub habitats and houses of Baja California Sur, México. Males have a smaller carapace and abdomen than females. The length and spination formula of the first leg differ from females; the first legs are longer, and the chelicerae have stridulating grooves in males.

Keywords: *Plectreurys*, Mexico, Baja California, taxonomy

The family Plectreuridae is recorded only from North America and Cuba where they inhabit arid zone habitats from southeastern United States and Cuba to southeastern Mexico. Plectreurids are often considered a relictual family of haplogyne spiders and are currently grouped in two genera, *Kibramoa* Chamberlin 1924 and *Plectreurys* Simon 1893. The latter genus contains 18 species from North America, nine of them known from Mexico, with four from the Baja California Peninsula: *P. tecate* Gertsch 1958, *P. valens* Chamberlin 1924, *P. bicolor* Banks 1898 and *P. arida* Gertsch 1958 (Gertsch 1958; Platnick 2004).

Originally, specimens of *P. arida* were identified by Chamberlin (1924) as *P. tristis* 1893 from Sonora, the Baja California Peninsula, and adjacent islands in the Gulf of California. Gertsch (1958), in his revision of the family Plectreuridae, assumed that these species and some specimens determined as *P. valens* by Chamberlin (1924) and assigned them to *P. arida* as a new species, with a distribution restricted to the state of Baja California Sur and some islands in the Gulf of California. In this same work, several species of *Plectreurys*, including *P. arida*, were added to the *tristis* group, as the male palps exhibit a spherical bulb with a long, thin and, in some specimens, coiled embolus, and a coupling spur is present on the first tibia of the males. Concerning the biology of *P. arida*, it is known that this species has been collected under stones in localities near the shore line and also in canyons, without specifying its microhabitat.

Only females of *P. arida* have been described from the Baja California Peninsula. Here, the first description of males is presented. Females and males were collected by hand and with pitfall traps

in xeric shrubs near two oases and houses in Baja California Sur.

Measurements (in mm) were taken using a standard ocular grid with a Zeiss dissecting stereomicroscope, following the format of Gertsch (1958). Drawings were prepared with a camera lucida. Specimens are lodged in the California Academy of Sciences, San Francisco (CAS), National Collection of Arachnids in the Instituto de Biología, Universidad Nacional Autónoma de México (CNAN), and the Arachnid Collection in the Centro de Investigaciones Biológicas del Noroeste (CACIB).

Family Plectreuridae Simon 1893

Genus *Plectreurys* Simon 1893

Plectreurys arida Gertsch 1958

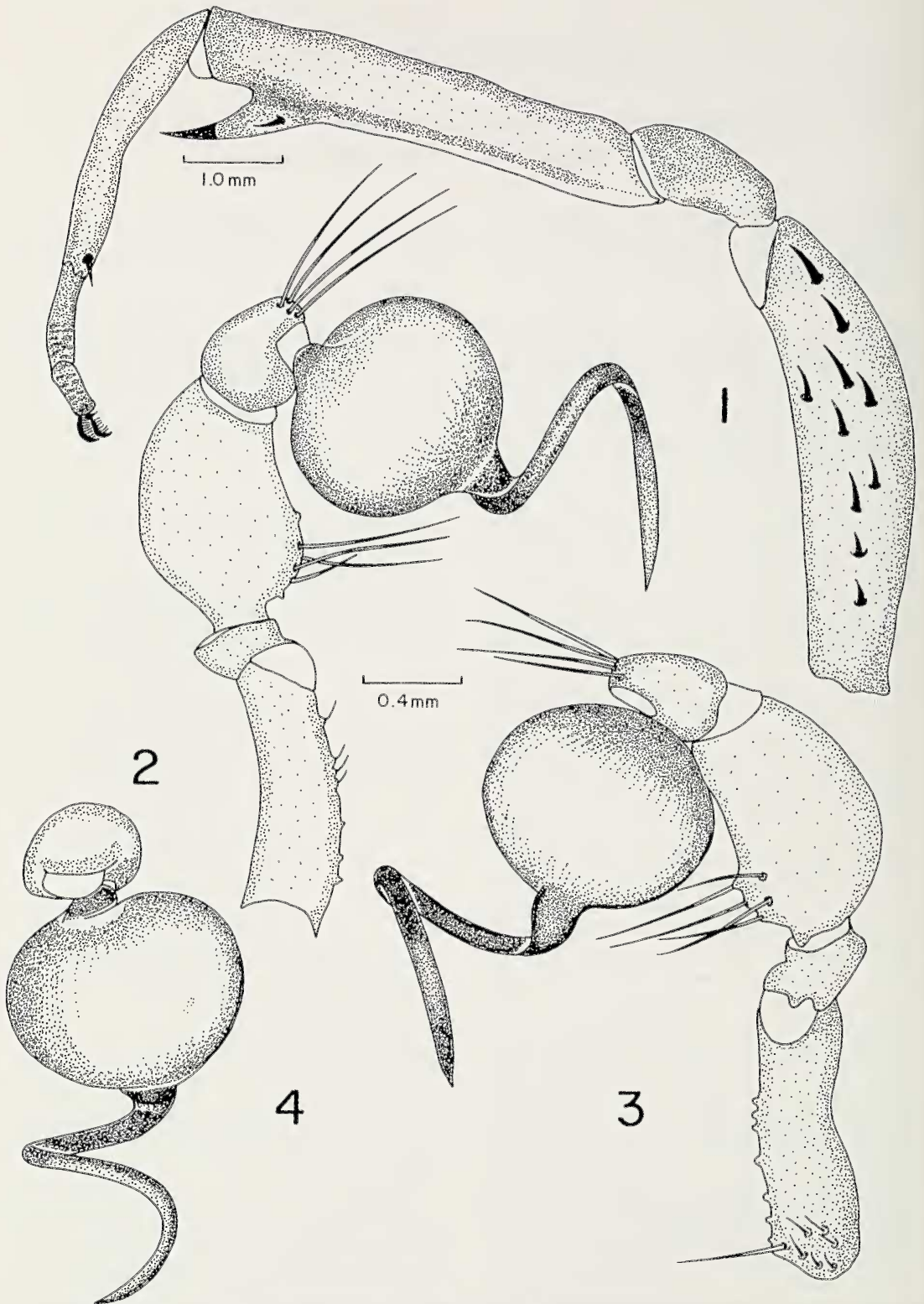
Figs. 1–4

Plectreurys arida Gertsch 1958: 26–27, fig. 90.

Type specimen.—Holotype female, Ballena Island, Baja California Sur, MEXICO, 24°29'N, 110°25'W, 9 June 1921, J.C. Chamberlin (CAS, not examined).

Material examined.—MEXICO: Baja California Sur: 2 ♂, 2 ♀, La Purísima, 112°02'54"N, 6°12'23"W, elevation 291 m, 16 June 2003, M. Correa (CACIB; 1 ♂ in CNAN); 2 ♀, Cd. Constitución, 111°40'15"N, 25°01'57"W, 21 April 1996, R. Domínguez (CACIB).

Diagnosis.—*Plectreurys arida* resembles *P. bicolor* in body structure and in the spherical bulb of palp with coiled embolus. It differs from *P. bicolor* in having a shorter, stouter, and distally more curved embolus, and from *P. valens* in having an epigynum that is wider than long. The males are assigned to *P. arida* because both sexes were collected together and the females were used to con-



Figures 1-4.—*Plectreurus arida* Gertsch. 1. First right leg of male, prolateral view; 2. Right palp, retrolateral view; 3. Right palp, prolateral view; 4. Bulb, frontal view.

firm the identification against the original description by Gertsch (1958).

Description.—*Males* ($n = 2$): Total length 7.8–8.4 mm, carapace, chelicerae and legs shiny mahogany brown. Carapace almost smooth with few uncolored hairs. Carapace length 3.8–4.1 mm, 2.5–2.9 mm wide. Anterior eye row weakly procurved from frontal view and almost straight; median eyes separated by their radius and almost two diameters from lateral eyes, which are larger by ratio of 6.6. Posterior eye row slightly recurved, oval median eyes separated by their diameter, as well as from lateral eyes. Ocular quadrangle broader than long narrower in front. Clypeus curved sloping in front, with a height of five diameters of anterior median eye. Chelicerae with stridulating grooves in retrolateral view. Sternum 2.0–2.4 mm long 1.5–1.7 mm wide. First pair of legs longer stouter than others. Femur I, 4.5–4.8 mm; patella I, 1.5–1.7 mm; tibia I, 4.3–4.8 mm; metatarsus I, 2.5–3.0 mm; tarsus I, 1.3–1.5 mm. Tibia and patella IV, 5.8–6.5 mm. Ratios of width to length of segments of first leg: femur, I 4/2; patella, I/ 2.0; tibia 1/5; metatarsus 1/ 10.4. Spines of first leg: femur with 10 prolateral; tibia with prolateral spine near base and strong retrolateral spur ending in stout spine; metatarsus with short robust prolateral spine. First metatarsus and tarsus curved, latter with false sutures in distal half. Tibia II with 2-2-2-2 spines and metatarsus II with 1-1-1-2; paired claws of first tarsus with 8 teeth; unpaired with one denticle. Abdomen 4.0–4.3 mm long 3.0–3.4 mm wide, gray in color, with black, thin setae; epigastrium more sclerotized than in females. Palps with spherical bulb with tubular long thin embolus which forms basal coil then curves distally, length of embolus not exceeding length of bulb.

Distribution.—This species is known only from

Baja California Sur and adjacent islands in the Gulf of California.

Natural history.—Males, female and juveniles were captured by hand and with pitfall traps during April, June, and November in xeric shrub land areas and in houses. One female was captured under stones in a tubular burrow 30 cm deep, and the entrance was covered with silk; one male was collected while wandering at night and four juveniles collected from pitfall traps. During an annual sampling (2002–2003), only eight specimens were collected, probably because the population is very small or sedentary, remaining in their burrows to avoid the high temperatures of this area.

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LITERATURE CITED

- Chamberlin, R.V. 1924. The spider fauna of the shores and islands of the Gulf of California. Expedition of the California Academy of Sciences to the Gulf of California in 1921. *Proceedings of the California Academy of Sciences* (4)12:561–694.
- Gertsch, W.J. 1958. The spider family Plectreuriidae. *American Museum Novitates* 1920:1–53.
- Platnick, N.I. 2004. The World Spider Catalog, Version 4.5 <http://research.amnh.org/lentomology/spiders/catalog81-87>. The American Museum of Natural History, New York.

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